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Report of 1957–58 three-term experimental program in humanities at M.S.U. to test effects of increasing the teaching load and of giving students more independent work. Special classes met 3 hours a week instead of 4, with independent study once a week. Although the number of students taught by each instructor was substantially increased, consensus among instructors was that the plan was practical. Results showed no significant differences in student performance between experimental and regular sections, although weak students were less successful at independent work.

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A MAGAZINE OF GENERAL EDUCATION PUBLISHED AT MICHIGAN STATE UNIVERSITY

The *Primogens* Revolution
KONRAD STARKNAKT

Re-Creation in the Humanities
CARL R. HAUSMAN

The Art of Science
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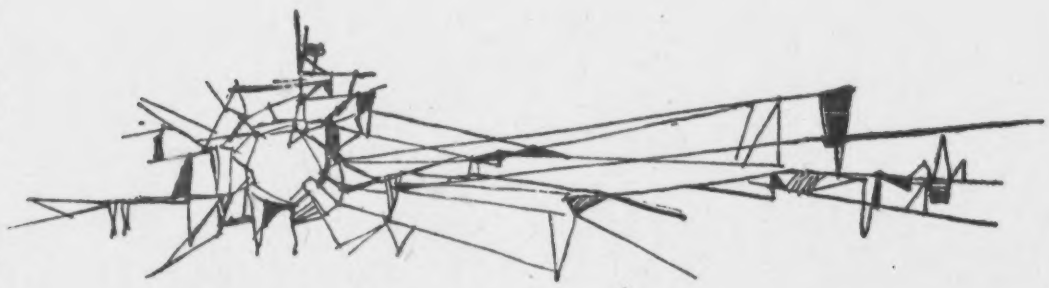

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JOSEPH L. SAUPE

*Contributors are identified on the inside back cover.*

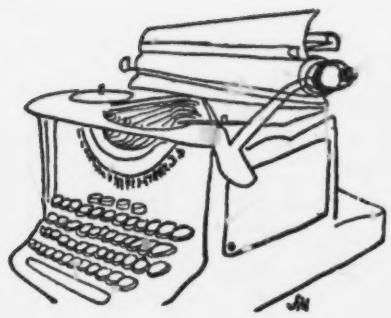
# *"Pure" and "Applied"*

THE "PRACTICAL" MAN . . . may ask what all this talk about culture has to do with an Institution, the object of which is defined to be "to promote the prosperity of the manufactures and the industry of the country." He may suggest that what is wanted for this end is not culture, nor even a purely scientific discipline, but simply a knowledge of applied science.

I often wish that this phrase, "applied science," had never been invented. For it suggests that there is a sort of scientific knowledge of direct practical use, which can be studied apart from another sort of scientific knowledge, which is of no practical utility, and which is termed "pure science." But there is no more complete fallacy than this. What people call applied science is nothing but the application of pure science to particular classes of problems. It consists of deductions from those general principles, established by reasoning and observation, which constitute pure science. No one can safely make these deductions until he has a firm grasp of the principles; and he can obtain that grasp only by personal experience of the operations of observation and of reasoning on which they are founded.

Almost all the processes employed in the arts and manufactures fall within the range either of physics or of chemistry. In order to improve them, one must thoroughly understand them; and no one has a chance of really understanding them, unless he has obtained that mastery of principles and that habit of dealing with facts, which is given by the long-continued and well-directed purely scientific training in the physical and the chemical laboratory. So that there really is no question as to the necessity of purely scientific discipline, even if the work of the College were limited by the narrowest interpretation of its stated aims.

THOMAS HENRY HUXLEY
*Science and Culture,* 1880



# *Prince Charles*

WE TEACHERS NO LONGER TALK much of the Van Doren affair. Like most such moral bonfires, it burned hard and died fast—leaving only the acrid smell of scorched reputations. We grew quickly tired of the subject. We recognized its importance, but somehow that only increased our weariness. We recognized, too, that the shortcomings of a profession were involved, and not just those of a scholarly person. This helped account for our weariness. In the perspiring Charles stood every one of us. For during those last learned weeks of Scholarship and The Big Money, did we not acquiesce in an image of the scholar as intellectually wrong as it was later shown to be morally perverse?

Our anger over the moral aspect of the case seems, in retrospect, a bit strange. We all have sufficient cause to know that, in one way or another, thousands bid good-bye to professional honor. The fact that Big Money rarely figures is accidental. There is, to cite a small but untrivial example, the popular teacher of Bible who never misses a Saturday afternoon of college-professional football and who exclaims: "I know it's immoral, but I love it." Consider, too, the inverse relation between the amount of political liberalism on a campus and the number of faculty Jaguars. Somewhat more painfully, one might note the job-preserving silences of the McCarthy era.

All of this is so plain that one might unsympathetically attribute our anger at Van Doren to the outrageous price he was able to command—far beyond the going rate. Surely his subservience to the Gods of Things as They Are is nothing new; one could write a history of American education in terms of it. But good taste demands that such subservience be . . . well, in good

taste. Van Doren's mistake, like that of the unclothed Emperor, was in going on parade.

In the same realistic vein, one might also suggest that heroic resistance to Madison Avenue lures is hardly to be expected from a young man who subsists on a Columbia instructor's pay and makes no bones of his all-American hankering for better things. At least it shouldn't be expected by those who, in their classrooms, look to economic motives for explaining human behavior. We have raised the pay for judges with this unwholesome human truth in mind, and while the need to do the same for college teachers is sufficiently dismaying, it should not really surprise us.

THE REMARKABLE ASPECT OF the Van Doren performance was intellectual, not moral. Why, we must ask ourselves, did we generally accede in the public notion of the scholar as a kind of fact-filled freak? "Give me," said Emerson, "insight into the meaning of today. . . . What would we really know the meaning of? The meal in the firkin; the milk in the pan; the ballad in the street; the news of the boat; the glance of the eye; the form and the gait of the body;—show me the ultimate reason of these matters . . . and the world lies no longer a dull miscellany and lumber-room." As opposed to Emerson's Man Thinking, Van Doren stood forth as Prodigious Parrot, sweating out a performance whose essential stupidity may only be matched in a doctor's orals. The American scholar was applauded as a genial pedant, and this we were able to believe—with Van Doren—would "increase public respect for the teaching profession."

The sad thing about citing Emerson on the nature of the American scholar is that his ideas are even less generally accepted today than when he offended Harvard professors with them more than a century ago. In the recent *Times Literary Supplement* devoted to The American Imagination, a writer on the subject of American scholarship expressed himself as follows: "The false analogy with science which suggests to the scholar that any fact will ultimately be valuable now makes him willing to spend his time on inquiries of which he himself is unable to state the point. In literary studies, particularly, the modern mode is to count images or themes, detect far-fetched parallels and generally worry a poem or a novel until Raggedy Ann is nothing more than a heap of sawdust. And each grain, though without value in the market-place for ideas, is scholar's gold. This resignation to pointlessness is especially conspicuous in the scholarship of art and literature, those subjects being the very antithesis of futility and incoherence. But the willingness to ignore

intellectual import also governs much of the work done in American history, economics and sociology."

General education is significant bec use it rejects the scholarship of pointlessness, and its faltering course on most campuses shows how professionally suspect this makes it. The world of American scholars is one of proud, pedantic innocence—where knowledge comes, wisdom forever lingers, and Prince Charles inevitably waits in the wings.

T.B.S.

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## *On Viewing Gentile Bellini's "Procession"*

*The warm Venetian sun enwraps the Square.*
*The long procession now begins to move*
*Down Sansovino's giant black-etched stair*
*Through Porta della Carta, all for love*
*Of Christ and of Saint Mark. Above the door*
*The winged lion shines; the trumpets' brass*
*Reflects the light in sound. The white-robed choir*
*Intone the 'Alleluia' as they pass.*

Bellini, surely you saw times you dreaded,
And yet somehow you kept serene through all—
As when the Sultan had a slave beheaded
To demonstrate the angle heads must fall.
You left the court, oblivious of fame,
Returned to Venice and its patron saint
Still firm in faith and gentle as your name,
Still finding gentle splendor in your paint.

Today a black chain threads across the stair
Up which no tourist any longer moves,
And bands play loudly in a crowded Square
Bespattered by the many-winged doves.
Yet one may turn to Gabrieli's tones,
To men who reverenced Theodore and Mark,
To times when quick faith lodged in living bones
And hearts bowed down before their hierarch.

RUTH G. VAN HORN

KONRAD STARKNAKT

# *The* Primogens *Revolution*

IT SEEMS ABSURD to occupy myself with reminiscences about a bygone era when I could so easily venture out one last time to see, instead, more of the astonishing sights of twenty-first century America. But reminisce I must in the hope that by writing of the old and the new I can establish for myself a connecting link with the unknown future.

I feel as yet no overpowering desire to abandon the idea of spending my remaining natural life in two-year sojourns separated by forty-year periods in deep-freeze. But the prospect has become less attractive than it was almost half a century ago. I had expected a certain absence of rapport between widely separated generations, but I hadn't expected such an overwhelming sense of loss through lack of companionship—the absence of anyone with whom to share. I reminisce alone.

---

In 1959, when Karschmidt successfully determined the nature and function of bound-water in poikilothermous animals, and Stamm, almost simultaneously, developed a technique for inducing water molecules to take positions as continuous but unattached layers, the stage was set for deep-freezing

warm-blooded animals. Since I had done much of the preliminary work with mice and dogs, I answered my own call for a human volunteer. It seemed a natural thing to do—especially when no one else appeared to share my faith in the process!

I began the bound-water replacement diet in the fall of 1959 and entered the deep-freeze three months later. I remember thinking that Easter rather than Christmas would have been a more appropriate time.

It was regrettable to learn that the skilled helpers to whom I had entrusted my life had all perished before the coming of the present Millennial era, for it was in the year 2000 that their able successors supervised my thawing out. (Was it only two years ago I revived? So much has happened.) I wish they, too, might have seen the effects of weather control on our Arizona desert—or was it better as a desert than as a kind of Garden of Allah? Who can say?

Even before I left the recovery room, I was aware of astonishing changes—the equipment, the quarter-tone music in stereo, the exceedingly rapid spoken communication with unfinished sentences fully understood, the feminine-seeming clothes worn by the men. Outside the Institute I encountered familiar-unfamiliar Buck Rogers accoutrements for solitary flight and throngs of swift and silent cars on a monorail network, with ski-lift arrangements for union with long-distance jet carriers.

LIFE FOR THESE PEOPLE is an ever-changing succession of new technological experiences. The latest development is television with trans-space tactility. Perhaps the promise of even more remarkable progress is responsible for the fact that no one has expressed a desire to join me in the next stage of my experiment; or maybe the reason is the impending breakthrough in the use of rejuvenation extracts. Probably I shall have tired of the deep-freeze method of life extension myself, at the end of this next forty-year interval.

When the staff at the Institute pronounced me "ready to go" (the only damage was to a portion of the liver which molecular-disintegration comfortably disposed of *in situ*), I emerged into a world where a key phrase seemed to be "the September Revolution," an event credited with profound alterations of Millennial society. I was given an interview with Clements, Director of National Education, and our conversation, which dealt primarily with that Revolution, is here with me on tape as an astonishing summary of the years during which "The Upside-Down System" was invented.

Thinking back, I can't comprehend why we of mid-century didn't stumble

upon the ideas that led to the September Revolution. We were caught fast, I suppose, in the trap of tradition.

The finest scholars at mid-century, during the last days of The Upside-Down System, were preoccupied with teaching only selected adults. Below them at various levels were the less-than-top-drawer savants who bore the brunt of popular, collegiate education. Still further down the scale, working with younger and younger pupils, were less and less well paid and less and less well trained products of the pedagogic system.

It was assumed in those days that children and youths were unworthy of the best efforts of educators. It was also assumed that one should expose children only very gradually to complex relationships. These assumptions made it natural to let the youngest members of the society develop haphazardly through the years until they had lost much of their spontaneity and had hardened into creatures who considered education to be that which was told to them by a well paid expert.

Such a system quite naturally perpetuated itself for economic reasons. The "higher levels" were attractive by reason of higher pay quite as much as for the satisfactions to be derived from association with other scholars. At the opposite end of the scale, teachers in elementary schools felt little self-esteem —in large part because of their low pay. Not only were they humbled by their economic status, but they had little interest in self-improvement, unless it was with the aim of rising in the hierarchy. Acting defensively, those who remained in the lower levels complained of poor preparation given them by *their* teachers, and discharged their obligation as best they could.

It wasn't surprising that in the higher echelons there was intense dissatisfaction over the plethora of students with poor adjustment to the idea of learning for its own sake, or even for the sake of a more harmonious world. The rare, scholarly pupil was thought to be the result of a fortuitous combination of genes, and almost no one considered the importance of attitudes toward learning which had been instilled by parents—acting, so to say, as teachers-surrogate.

---

STARKNAKT: "Doctor Clements, how did the September Revolution get its start?"

Clements: "It was the result of a series of coincidences. A few ordinary citizens—parents of 'backward' children, actually—happened to get together by chance in Florida. The parents discovered that they, like their children, had something important in common—rather high test scores of certain

kinds, but an inability to make a success of academic life. Most of them had squeaked through college by the skin of their teeth; three had flunked out.

"It happened that two scholarly societies were meeting in the same city at the time, and the parents decided to settle some questions by consulting some of the psychologists and embryologists attending."

S: "Embryologists?"

C: "The problem of determinism had occupied the attention of embryologists for years. One of the coincidences I spoke of was that two of the parents overheard some of the embryologists discussing determinism and the Clonal Theory of Antibody Formation, introduced themselves, and invited the scientists to consider their particular problem."

S: "And they did?"

C: "At first they were reluctant, but finally they suggested the possible relevance of the '*primogens* principle,' which goes hand in hand with determinism in embryos and means simply that with respect to importance for the future, the more important of two equal events is the one which occurs first. The psychologists chimed in at this point to cite examples from their experience."

S: "I don't believe I . . ."

C: "For centuries life was believed to commence with birth, and birth was considered to be in most respects the most important event of life. Gradually the realization grew, as you know, that not birth but conception was life's most important event. By charting the succession of events that occur in embryos, students of the subject concluded that the 'curve of importance' of separate events *descends* during one's life. They pointed out that for an individual entering the two-cell stage no more profound change in the zygote, aside from fertilization, could be imagined than that by which it sometimes separates and becomes two! Later events are successively lower in importance. Strangely enough, the significance of this '*primogens* principle' for education had never been adequately explored. Before 1975 men clung to the idea that the most important phases of education come after puberty, ignoring the writing of men like Jonathan Swift with studied care. In terms of physical maturation for the species' sake this was not incorrect, but maturation in the non-procreative sense being what it is—varying widely among individuals and apparently multifactored within different somatotypes —was it not wrong for educators to be enthralled by it and neglect the more basic *primogens* idea?

THE CITIZENS' COMMITTEE — as it came to be called — was unwilling to think of maturation as anything more than a red herring in the training of their 'backward' children. They determined to exploit the principle of *primogens.* It appealed to them far more than genetic determinism, totipotent-environmentalism, 'late blooming' and other such philosophies which held educators captive."

S: "But how could a mere change of philosophy in a few parents bring about such a complete . . . ?"

C: "The next step has a connection with you, Doctor. That's one reason I'm so glad to have you back from . . . back with us. Do you recall your last remarks before entering the deep-freeze?"

S: "You mean that in order for progress to take place, men must either die or retire, or — I think I added — be deep-frozen?"

C: "Right. We call it 'Starknakt's Law.' For a long time it was mentioned in cynical jest, but it became a subject for very earnest debate in the secret meetings held prior to 1975."

S: "You don't mean that liquidation . . ."

C: "Oh, no. We of the Revolution had no intention of liquidating anyone, at least not in an ominous and final sense. Under our new system, 'retirement' was redefined, divorced from all connotations of chronology, and made an achievement to be striven for as early as possible. The trick was turned by the younger Townsend in the California legislature; the number of elderly voters had swelled by that time and he put through the necessary legislation with ease. Other states had to follow suit immediately, or they'd have lost most of their adults through emigration. In fact, Florida's legislature had to be called into emergency session!

"Young Townsend's idea was simplicity itself: make retirement pay *higher* than one's regular pay. Up to the age of thirty-five retirement wasn't permitted; in fact, it wasn't until a person reached a certain income that retirement was allowed to be worthwhile at all, but then it became worthwhile with a bang! Educators interested mainly in advancement for income's sake rushed to retire.

COUPLED WITH THE Principle of Least Effort, the new legislation automatically removed most of the dead wood at the top of the old system, and the Revolution was on its way!"

S: "But the economics of it . . ."

C: "An inspired Congress solved that aspect of the problem. By doubling

security on outer-space projects, we convinced the world we were getting hot on a project to colonize Mars. Actually we pulled everyone off such projects and put the billions thus saved into retirement and educational budgets. You may have heard of the outcome: the other great powers went bankrupt trying to beat us to Mars. One of them did it, so they say, but the crew is apparently still there, sitting in pointless, starving triumph. Meanwhile our educational methods have caused us to forge ahead at an uncatchable rate."

S: "But what made the teaching of mere children confer such prestige?"

C: "The expression 'mere children,' is of course an archaism, Doctor, and a socially unacceptable term!

"After the breakthrough on retirement, legislatures in several key states went quietly to work and inverted the educators' salary schedules in public schools and state universities. Other states had to follow, as did private schools."

S: "There must have been a mad scramble . . ."

C: "Only by those who hadn't seen what was coming. *Primogens* by this time had been satisfactorily elaborated by psychologists, and educational literature on the subject had proliferated. Everything pointed to an up-ending of the system, with emphasis on expertly teaching the very young. Taxpayers, once they were assured their pocketbooks wouldn't be affected, turned back to sports and the latest models of microjets and monorail cars.

"Unfortunately, there weren't enough professors to go 'round at the start, and the best of the oldtimers had to be retained at the lower levels, with salaries which appeared magnificent by their former standards. Presently, however, premedical students and the like began to switch to teaching because of the better pay, opportunities for pre-school research studies, and the sense of genuinely contributing to society. And you can imagine what converting space-project dollars to education meant in terms of facilities! Every small town, for example, obtained a library such as you used to find in only a few places in the state."

S: "But the change-over! There must have been a sag in college work, and even in high schools . . ."

C: "You're right. The transition was rather grim! It was saved from being intolerable by a handful of dedicated teachers who remained in every institution, unperturbed by salary cuts. We owe them a lot. But they had been subsidizing education all their lives and didn't much mind the added sacrifice."

S: "And the students?"

C: "At first they gave us trouble. They thought their security was jeopardized and demanded kindergarten teachers, part time — the *new* kindergarten teachers, that is. Their old teachers complied for a while; but working with college students was small challenge after dealing with the delightfully receptive minds of youngsters, and voluteers became increasingly hard to find. Then things took a surprising turn.

SOME OF THE TEACHERS, tiring of the lecture routine, took to making tapes of their lectures and, for 'kicks,' pantomimed them in class. At first students were entertained, but soon they demanded 'live' programs. In several schools, students got the tapes, memorized a few lectures, and chanted them to drown out the professor. When the professors resigned, taking their tapes with them, some of the livelier students who had memorized tapes in advance took the stage. But they soon got into disputes over the wording of certain passages, and a good many became interested enough to consult sources. We acted hostile toward such practices, and as a result it soon became a fad to know things that others didn't. Then we knew we had the system rightside-up at last! Of course, many students did suffer, but in one way or another we limped along until the first of the new generation under *primogens* came along."

S: "I see what you were driving at in inverting the salary scale, but how can you justify diverting so much talent to the very lowest levels of education? Certainly a child in, say, the ninth or tenth grade needs at least as fine a teacher as one in the second or third."

C: "You forget that the fine teacher in the lower grade has done his or her work extremely well. If a top-flight teacher has a chance to influence a child near the base of the pyramid, it follows, under *primogens*, that he will have more effect there than he would higher up. We get more return on the investment of the best teachers' time. They teach pupils to learn by their own efforts; they avoid talking to children as authorities. 'I'll pretend I don't know so we can find out together' is the method.

"The work of these ace kindergarten teachers pays off all along the line. The kids nowadays are avid readers and interested pupils. They have had created in them a *driving desire to learn*. Really, doctor, this doesn't seem as remarkable to me as the fact that you fellows didn't perceive it! Come now, acknowledge that you yourself felt handicapped in college because of inadequate early training. In foreign languages, perhaps? Be honest. Everyone used to feel that way."

S: "Well, I confess I. . . . But I'm sure I learned a great deal from *some* of my elementary and secondary school teachers."

C: "Ah! And how would you like to repeat your schooling with *all* your teachers like those few?"

S: "How do the professors like it? It seems so strange to stop thinking of a university as 'a collection of scholars' and think instead of a congress of kindergarten teachers!"

C: "But they are exactly the same — the same kinds of people, the same high interests. The only difference you'd notice is the small talk — about the minds they've discovered and the successes of their pupils now being graduated from high school or college. Our questionnaires show that the psychological rewards and personal satisfactions are consistently listed as 'higher,' and 'much greater,' because the kids come back and speak with such enthusiasm about their work in the early, critical years. In fact, kudoes are so great we may soon be facing the problem of non-retirement again."

S: "How about the satisfactions of mingling with professional colleagues in one's field?"

C: "We have many ways to bring scholars together. Two-way, three-dimensional television you have seen. Transportation is free for educators and meetings are frequent. I think there are more professional contacts than in the old days.

As TO EXPLAINING COMPLEX MATTERS to young minds, we've reaped an unexpected harvest. Scholars, as you know, used to rely upon more and more esoteric vocabularies. Only a very few could understand one another in the rarified atmosphere created in the respective fields. Faced with the need for reducing explanations to simpler terms, some have found simpler explanations! The Law of Parsimony has come to our rescue."

S: "How are things working out for the students? Who on earth *teaches* them?"

C: "Students are doing more or less what they did when you supposedly taught them: they learn from each other and from books. The best education has always been self-education. The old 'bull session' has been exploited. Compulsory attendance is gone. Classrooms as such are gone. Topics for the bull sessions (we call them conferences) are posted each week and a student may attend any that appeal to him. Library facilities have been increased by a factor of six."

S: "Am I to infer that these great masses of students proceed in an orderly manner from conference to conference and wind up after four years with a ference. It is really marvelous! No paternalism, no students 'waiting to be degree?"

C: "Earlier if they can pass the examinations."

S: "And do many continue for post-graduate study?"

C: "That's a very important part of our system."

S: "You mean, I suppose, that graduate students conduct the classes?"

C: "Please, Doctor! Not classes! And graduates don't conduct — they *defend!* You can spot them hurrying to their laboratories and offices and the libraries, bent on clearing up points raised by undergraduates during a confed,' no hesitation to challenge established ideas. Instead, we have peer-oriented students, with the age-old peer-consciousness acting as a stimulus. And does it stimulate!

---

As this Stamm-water infiltrates my body, I feel growing regret at holding to my original plan. In two years I have barely scratched the surface of things Millennial. University students I have met seem so much more alert and vitalized than those I remember. I wish some of them could say I had been their kindergarten teacher!

---

## *Leaf Cutter's Song*

*Work-Chant of Benin City, Nigeria; translated from Bini*

| | |
|---|---|
| Who's cutting leaves there? | Chop! Chop! |
| Me, only me. | Chop! Chop! |
| What are you cutting leaves for? | Chop! Chop! |
| To build me a house. | Chop! Chop! |
| What do you want a house for? | Chop! Chop! |
| To get me a wife. | Chop! Chop! |
| What do you want a wife for? | Chop! Chop! |
| To have me a child. | Chop! Chop! |
| What do you want a child for? | Chop! Chop! |
| Children make your life. | Chop! Chop! |

*Translated by* ROGER W. WESCOTT

CARL R. HAUSMAN

# *Re-Creation in the Humanities*

WE OFTEN SAY THAT in the humanities a student should learn to "think creatively." What do we mean by this, and how can it be accomplished? For want of space, much of what I have to say in answer must be presented dogmatically.[1]

## I

CREATIVE ACTIVITY ORIGINATES in the artist's awareness of emotional *turmoil, which demands satisfaction* in the construction of an aesthetic object. Initial emotion is felt as the effect of a stimulus which becomes the "subject" of a work. This subject may be real (an historical event, an actual landscape or person) or imaginary (a fictitious event, a fragment of melody in the mind). As it first appears to the artist, it may be only dimly understood. But clear or vague, it undergoes change and growth in his hands. Indeed, until he completes his work, the artist does not know fully what he seeks to create and how he will present it.

Three things should be remembered about the artist's subject. It is external to his created work, it arouses emotional excitement in him, and both it and the emotion attached to it are experienced prior to actual creation.

Creative work begins when the artist develops his perception of the subject. As he does this, his original emotion is transformed into a new, "artistic" or "creative" emotion. The vision of the artist emerges as the work takes form.

The creative act can also be considered from the standpoint of the spec-

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[1] *An excellent summary of psychological writings on the subject may be found in Douglas Morgan's article, "Creativity Today,"* The Journal of Aesthetics and Art Criticism, *Vol. XII, No. 1, Sept. 1953. I am also indebted to interpretations by Samuel Alexander in* Beauty and Other Forms of Value, *London, 1933, A. C. Bradley in "Poetry for Poetry's Sake,"* Oxford Lectures on Poetry, *London, 1909, and R. G. Collingwood in* The Principles of Art, *Oxford, 1938.*

tator, whose aesthetic experience should be re-creation of the artist's. The successful spectator recognizes the subject as it exists for the artist independently of the actual creation, and he shares the artist's response to it. He comes to know how the subject is transformed, and, as with the artist, his initial emotional response to it undergoes change.

## II

THE SENSE IN WHICH THE HUMANITIES student should "think creatively" is suggested by this conception of art appreciation as re-creation of the artist's experience. That re-creative rather than creative thinking is appropriate for him follows, I think, not only from the fact that he is expected to become acquainted with great works of art, but also from the fact that truly creative thinking on his part hardly seems possible until he has felt the excitement of creative experience in others. To be truly creative, he would need to bring forth a new object, and as Aaron Copland remarks, "The making of something out of nothing is the special province of the creative mind." Such creative achievement is neither a necessary nor a primary goal for a general education program.

Treating the humanities student as a re-creative spectator does not mean, however, that he may not reach a creative vision of his own. Indeed, he is more likely to do so if he has learned something of what it is like to perceive creatively. Also, he will know how transformed subjects may serve as material for his own efforts.

## III

THE ABOVE ACCOUNT OF CREATION and re-creation suggests two basic approaches for the humanities classroom — through the subject and through the teacher's initial excitement over the work. The two are not separate, and as the illustration to follow will show, a teacher can hardly employ one without making some use of the other.

Approach through the subject may be either analytical or historical-biographical. In the analytical the teacher identifies kinds of subjects (secular, religious, landscape, court-life, etc.) and kinds of properties that belong to them (types of lines, color combinations, patterns of sound, etc.). He attempts to make the student sensitive to the sort of material with which the artist starts his work, to make him feel an excitement akin to that originally felt by the artist, and finally to get him to pass from this initial response to an apprehension of the subject as transformed by the structure of the created work.

Take, for example, Cézanne's "Mont Sainte-Victoire." While statements by himself and others may help determine what interested Cézanne about this subject, we cannot know precisely everything. What is important, however, is that analysis be anchored in traits of the subject-matter discoverable through the painting. The teacher might, for example, call the student's attention to what is represented — a landscape including sky, mountain, valley, with trees and a house in the foreground. If the student feels attraction for this subject matter, he may be led to see such things as the combination of warm and cool colors, the contrast of sharp edges of trees in the foreground with indefinite edges of houses and mountains further back, and the reflection of light over the entire landscape.

The student's grasp may be further sharpened by knowledge of the artistic problem that Cézanne intended to solve. He was dissatisfied with the absence of structure in the Impressionist painting with which he was familiar and so deliberately searched for formal aspects — the cone, cylinder, and sphere.

If the approach thus far has succeeded, the student has made contact with the subject. He has experienced the initial stage of the re-creative process and must now come to know the changes the subject has undergone. The teacher will point out how Cézanne's brush stroke is used to establish the shapes and the intricate space relations found in the painting, how all parts of the picture are built of small color planes which transform the initial subject, how the brush strokes guide the eye through the picture and give it a life of its own.

The historical-biographical approach can, if skillfully handled, be a forceful way of preparing the student to respond re-creatively. An indication of this approach has already been given in the reference to Cézanne's attempt to re-introduce a sense of form. Other such information relates to his personal attachment to the view of Mont Sainte-Victoire, how he labored over "realizing" nature, how he agonized over the way to create a new vision of the internal structure of things, how he desired to re-formulate Poussin's sense of the permanence of nature. Consideration of his tenuous place in society, his unsatisfactory relations to fellow artists, his persistence in the face of rejection by the Salon, all help to awaken the student's sympathy.

The historical-biographical approach is limited in what it can do. It does not give us the artist's perception of the subject or its internal make-up. The student must re-create these for himself. If he is advanced, this limitation may prove a virtue: it avoids the danger of the instructor's misleading him. But if he is a beginner, the use of this approach alone may fail to stimulate him to re-creation.

Approaching a work of art in terms of one's initial excitement over it poses special problems. In the first place, its success depends on intangible factors, such as the teacher's vocal emphasis, intonation, gesture, bodily movement, facial expression. Leonard Bernstein's popular lectures show how these things may all help. In the second place, emotions that are clear have objects. Thus intelligent impressionism can hardly avoid approaching re-creation through the subject. In the third place, emotions with which the impressionistic teacher begins are probably formed not by the subject but by the completed work. One might object that there is no difficulty here. Why not communicate from the beginning the experience proper to the artistic vision itself? Because doing so denies the student the re-creative experience to which he is entitled. Without it, he quite naturally meets the teacher's rapture over the finished creation with apathy, embarrassment and puzzled irritation. Just as the creator does not know precisely what he has to say until he has expressed it, so the student cannot know what is expressed unless he discovers it from experience of the subject.

THE TEACHER MUST TRY to put himself in the student's place, following the re-creative process, feeling and expressing emotions appropriate to the milieu of the work, and gradually transforming the artist's materials into the final excitement of the satisfied creative impulse.

I should emphasize two things about the re-creative approach I have described. One is that the humanities teacher should avoid trying to impart immediately his insights into works presented for study. Doing so can only give the student a superficial *knowledge about* the artist's vision. It does not give him *acquaintance with* artistic creation. The other is that the humanities instructor's aim is *not* to promote originality of vision. A remote goal may be to develop genuine creativity, but this is not directly to be sought for in the classroom.

C. A. LAWSON

# *The Art of Science*

SINCE SPUTNIK THERE HAS BEEN an epidemic of speeches, articles, and books discussing science, and an almost hysterical clamor for the training of more scientists and engineers. As a scientist, I suppose I should be happy for the public recognition that is thus being given to my field work. In a way I am, but at the same time I am concerned over what may happen to our educational programs as we begin to concentrate on turning out scientists.

Before a manufacturer can manufacture something he must decide what it is he wants to produce. Having made this decision, he figures out a process and designs tools that will change raw materials into finished products. Every part of the process is controlled by his concept of what he wishes to end up with. Automobiles require something different from ladies' hats. Similarly, if we wish to produce scientists, the kind of curriculum we have will depend on our concept of what a scientist is. And at this point I become concerned, for given what I take to be a widespread misconception of what a scientist is, it follows that many programs designed to produce scientists will in reality give us something else. This "something else" may fit perfectly the popular image of a scientist, but if that image is in error, our basic need will remain unsatisfied.

What, then, is a scientist? If we include within the term everyone who has any part in the total scientific enterprise, the range will obviously be wide indeed. At one extreme will be the genius who dreams up experiments

and at the other the janitor who sweeps out the lab. The common picture of a scientist, however, is that of an observer who can somewhow produce something called a "fact." He is a recording machine, somewhat like a camera. In addition to recording the facts, he also reasons about them. But this reasoning is a mechanical, impersonal kind of operation controlled by "the nature of the facts." The classifications he produces are either of things or of relations among things. The former yields the taxonomies of plants and animals, the latter become the general laws of nature. Thus, in the words of the *American College Dictionary,* science is seen as "a branch of knowledge or study dealing with a body of facts or truths systematically arranged and showing the operations of general laws."

If this is truly all there is to science, the method of producing more scientists becomes clear: acquaint the potential scientist with all that is known about a subject and train him to become a careful, clear, unbiased observer. If, however, science is not simply a collection of facts and relations, and the scientist is not just a picture-taking and classifying machine, something else is needed.

In my view, scientists are more than collectors and classifiers of facts. They are creators in the same sense as the artist or the poet. All depend on the external world for stimulation, and all try to interpret what they see. They succeed to the extent that their interpretations are "true."

THE CREATIVE ACT IN SCIENCE is the sudden insight, the compelling revelation of likeness where none existed before. It is the bringing together of previously unrelated ideas. It is the recognition of new analogies, frequently ones that strike men as not only improper but ridiculous. As Bronowski remarks, "The search may be on a grand scale, as in modern theories which try to link the fields of gravitation and electro-magnetism. But we do not need to be browbeaten by the scale of science. There are discoveries to be made by snatching a small likeness from the air too, if it is bold enough. In 1932 the Japanese physicist Yukawa wrote a paper which can still give heart to a young scientist. He took as his starting point the known fact that waves of light can sometimes behave as if they were separate pellets. From this he reasoned that the forces which hold the nucleus of an atom together might sometimes be observed as if they were solid pellets. A schoolboy can see how thin Yukawa's analogy is, and his teacher would be severe with it. Yet Yukawa without a blush calculated the mass of the pellet he expected to see, and waited. He was right; his meson was found, and a range of other mesons,

neither the existence nor the nature of which had been suspected before. The likeness had borne fruit."*

Kepler's mind was filled with fanciful analogies. One resulted in his attempt to relate the speeds of the planets to the musical intervals. By means of another he tried to fit the five regular solids with the orbits of the planets. Newton saw that the same force of gravity which reaches to the top of a tree to bring down an apple, might go on reaching beyond the earth, endlessly into space. It might reach the moon and hold it in its orbit. Mendel found likenesses in the behavior of hereditary characteristics and the mathematical combination series of algebra. Darwin and Wallace conceived similarities between human and animal populations that give rise to the theory of Natural Selection. In *Science and Method,* Poincaré describes how, ". . . just as I put my foot on the step [of the bus] the idea came to me, though nothing in my former thoughts seemed to have prepared me for it, that the transformations I had used to define Fuchsian functions were identical with those of non-Euclidean geometry."

To return to the matter of educating scientists. If science is essentially a creative activity, the potential scientist needs a vastly different kind of educational experience from that now generally given him. To be sure, he must acquire a foundation of knowledge in the various sciences, but beyond that his experience must be as broad as time will allow. He must study art, literature, religion, philosophy, and mathematics, for thus does he increase the possibility of that sudden illumination of likeness that leads to discovery.

The beginning scientist must be encouraged to dream and to speculate—with only this one reservation, that before he falls too deeply in love with a new idea he deduce its consequences and put them to experimental test.

*"Science and Human Values," *Universities Quarterly,* 10, May 1956, 247.

IRMGARD JOHNSON

# *Let Them Paint*

By what quick-and-easy process can a student be transformed from a passive or hostile glancer-at-art into an actively critical participant? There ought to be some way this side of Utopia by which "intelligent looking" could be achieved in a relatively short time.

Suppose one teaches a general education Humanities course, in which painting is one of the more or less integrated units. Suppose also that one desires for one's students the immediate experience of really *seeing* the paintings being discussed. Weekly lectures by qualified experts, class discussions of reproductions, even attendance at "live" exhibits fail to produce the type of "involvement" needed for real learning. An art laboratory is not available in the department; nor are many of the Humanities instructors qualified to teach painting—even if they had the time. What can one do? Risking the suspicion of one's Humanities colleagues and the scorn of the art department, one can let the students paint.

Can such permissiveness ever become academically respectable and at the same time accomplish the "intelligent looking" so matter-of-factly listed among the objectives of the course? How can students possibly paint without benefit of either instruction or the facilities of an art laboratory?

One must first take account of the situation. Relatively few of the students are acquainted with great paintings, even in reproductions. Their extra-class experience in this area consists largely of upward winks in the direction of post office murals or library portraits of the distinguished local deceased. Some have played with finger-paints in grade school; others more recently have tried number-paints. The few who have taken an art course of any sort are, comparatively speaking, experts.

Now these students find themselves confronted with a puzzling item on the "outside project" list: an original painting. As an alternative to a grueling research paper (possibly grueled out of the *Britannica*), or a comparative

*Subject: Mr. Zero of Rice's "The Adding Machine"; his world of loneliness, ignorance, etc. Technique: Expressionism, with brilliant colors, exaggeration, condensation, and symbolism.*

essay that would require a bit of genuine *thinking*, they can apparently now turn in that thing of their roommate's called "Design." Such crafty resourcefulness, however, is checked by what the instructor is saying: "This is not an art course but a course in *ideas*. Therefore your creative art project will not

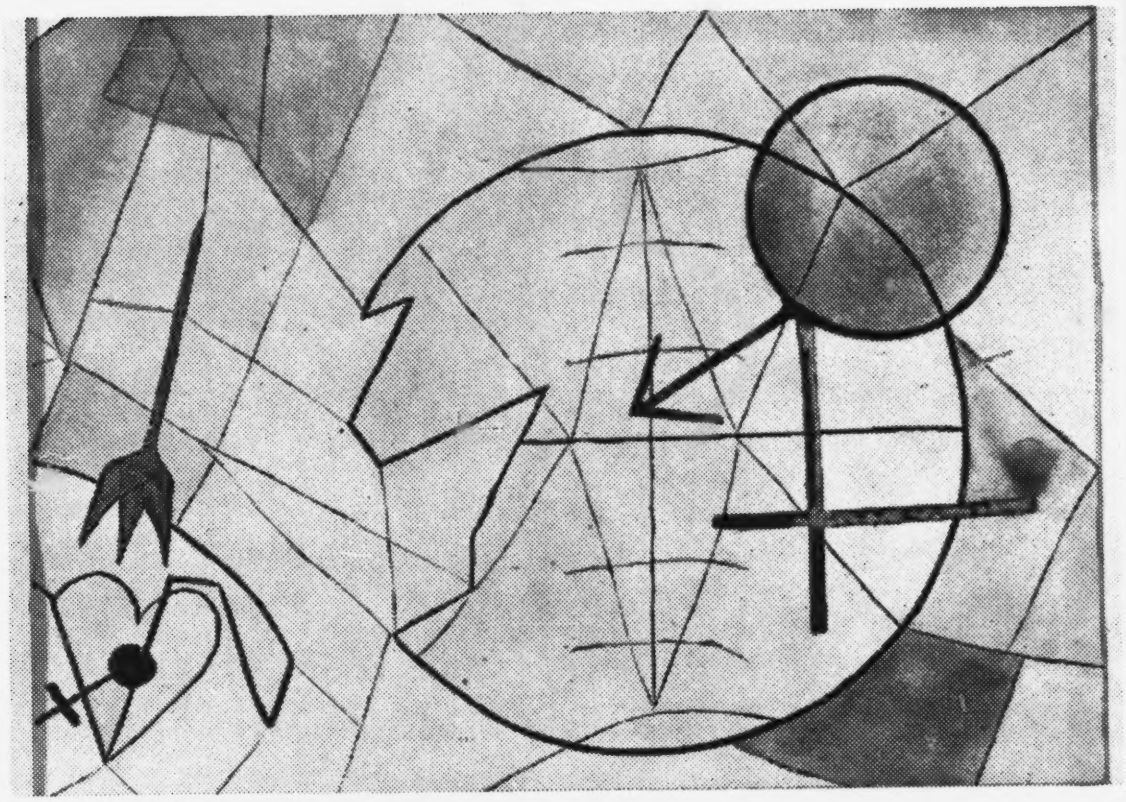
be judged by its technical competence and probably not even by other artistic merits. That would be unfair to the student who has never tried his hand at this sort of thing. It will be judged by the criteria listed here on the mimeographed sheet of suggested projects."

THERE IS A MOMENTARY FLUTTER of paper and the sad winging away of thoughts of perhaps copying that pretty scene saved from a magazine. For the sheet states that "Art projects are to be related in BOTH subject-matter AND technique to the materials of the course. The painting is to be accompanied by a one-page written report on how these relationships are accomplished." After a full minute of pure disbelief, questions from the class begin. Answers make clear that any idea, subject, or theme from any unit in the course may be explored and represented, however symbolically. Ideas may come from the literature, the philosophy, or even the music studied in the semester. Techniques? Any of those studied may be employed: Impressionism, Pointillism, Cezanné-ish Post Impressionism, Expressionism, Cubism, two dimensional design — among others. Objection: "I'd like to do a painting, but I don't think I could copy somebody else's technique." Explanation: "Since this is not a course in painting and since the project is not an exercise in imitation, work will be judged more on what it attempts than on what it accomplishes." Amateur efforts at realistic portrayal will almost inevitably be disappointing. Stylized or symbolic representation will best satisfy the purposes of the assignment.

Time is saved and comfort given by the suggestion that students may make several preliminary sketches and discuss them with the instructor. For those who want further guideposts, essays on aesthetics may be recommended and principles of painting reiterated. Students, however, usually do not seek to determine or apply aesthetic principles until confronted with particular problems of execution.

One must remember that only those who prefer this type of project embark upon it. For them a frequently lonely, courageous and exciting exploration takes place. They review ideas of the course, approaching them from various angles and with varying attitudes. Inquiry into media (e.g. oil or watercolor on canvas or posterboard) is done on their own. So is any careful scrutiny of techniques.

What kind of "art" is produced? Some is distinctly awful — in terms, that is, of criteria other than those stated. Some of it is spectacular in imagination, attractiveness, and manner of execution. But the paintings themselves are



*Subject: Faust's world. Symbolic figures representing his desire for all experience. Technique: two-dimensional design.*

least important of the results achieved. Consider some examples of what happens in class.

A number of symbolic representations, well-planned and dynamically painted, of Freud's "Ego, Id, and Superego" metaphor become the subject of several discussions which precede the regular hour's work. (The problem of the instructor is to keep them brief, since classes are on a somewhat rigid schedule and Freud has already been "covered.") As students compare the various paintings they can spot aspects of the metaphor which are emphasized, omitted or distorted. They first see the projects, then hear the written reports on how techniques were employed and how relationships to units of the course were understood and realized. A comparison with Van Gogh's Expressionism is suggested. The "artists," having first attempted modest anonymity, eagerly join in the discussion. Attention and interest could hardly be keener. (Compare this with the dull-eyed and silent consideration of, say, the "Mona

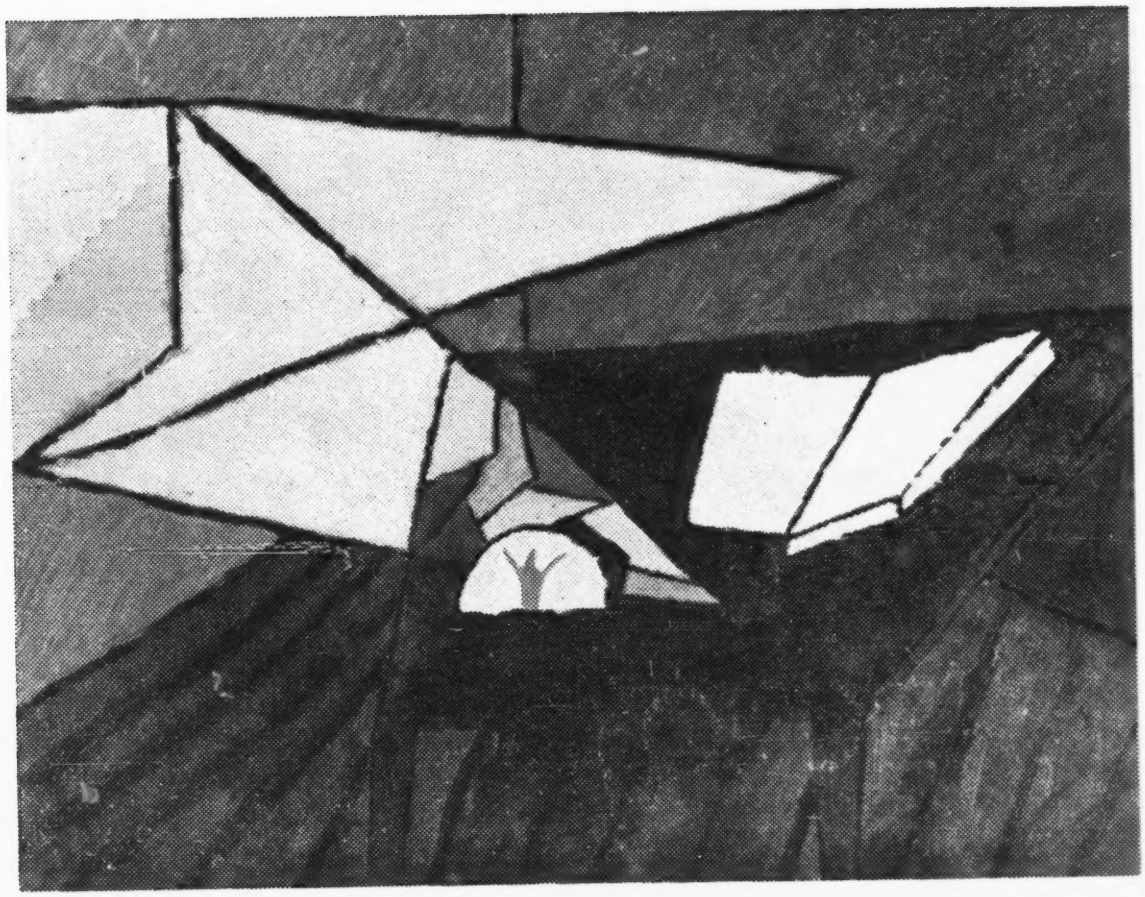
Lisa.") The class is not only strengthening and correcting its knowledge of assigned readings but is exploring the functions of line, color, mass, organization, and symbol.

ONE PAINTING IS A SOMEWHAT CUBISTIC portrait of Miguel in *Of Human Bondage*, emphasizing his emotional intensity by red and yellow and his shallowness by two dimensional planes. One, enclosed in a free-form outline, symbolically represents aspects of "the newer education" as set forth in Dewey materials. Others illustrate key ideas from "The Rubaiyat," Lenin essays, or *The Threepenny Opera* studied in music lectures. One of the best paintings (in terms of the criteria used) attempts to summarize certain important aspects of Orwell's *1984*. In the center is the paperweight containing a miniature country scene symbolizing not only the freedom and beauty the hero yearned for but also the hero himself. Winston's body, we can see, is being closed in on all sides by walls — not merely closed in but constricted and spied upon. The too-small enclosure is cubistically represented in harshly dull colors as opposed to the warmer tones of the central figure. While by no means flawlessly executed, the painting manages to express in non-verbal terms the horror of Winston's situation and makes a profound impression on the class.

Expensive paints, brushes, and canvas have rarely been purchased; in one case housepaint, toothpicks, and the back of a campus poster suffice as equipment, as do construction paper, paste, and scissors in another. But in spite of any crudity of tools, the learning which takes place on the part of both "artist" and class is surprising. Class discussion fosters recognition of relationships and sharpens critical insights. And along with some beginning recognition of aesthetic principles, many students quite suddenly gain a toleration for non-realistic art which a few weeks ago they were deriding.

Sculpture, I might add, is permitted but rarely attempted, possibly because the study of it is only a minor part of the course. One particularly successful work was a bulky bas-relief representing contrasting characteristics of James' "tender-minded" and "tough-minded." Left in the classroom for several weeks, it continued to draw circles of loquacious spectators.

WHAT ARE THE RESULTS SO FAR as the individual student-artist is concerned? Aside from whatever pleasure, pain, or profit he may derive from class discussion of his work, he has probably engaged in some intelligent and imaginative thinking. He has taken cognizance of a number of complex



*Subject: the objects on Winston Smith's desk (Orwell's 1984), with light coming through window. Technique: a type of Cubism. Interest in light refractions. Colors: dark browns, black and bright yellow.*

factors, discovering relationships and applying them in an organized and original fashion through an art medium. He has formulated a plan and carried it to completion.

Discounting whatever enthusiastic comments students make about such activity, one may still recognize its obvious and observable effects. These students, having achieved a painting, look at works of art with a new interest and concentration. They know what they are looking for, to a certain extent, and their more eager and frequent questions are directed toward the artist's intent and how he accomplished it. They go through the necessary process of careful examination preliminary to critical judgment. Final (or "frozen") judgments become less frequent, for they now realize the complexity of even

seemingly simple works and the possibility for deeper insight and appreciation. Often after class they enter into discussion with others of the brotherhood who have been similarly stimulated.

The activities I have described take place in my Humanities classes at the University of Florida. It is a temptation to claim more for them than is actually checkable, and their permanent effects have in no way been studied or tested. For the moment one may hope, however, that something of continuing significance is at least begun for a number of students, and that those critics who would call these experiments a "prostitution of art" will forgive — and reconsider.

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## *Christmas on Campus*

This brightest day the snowflakes trace
Black-penciled boughs with diamond grace,
Earthly limbs for heaven's lace.

Dark brush of cedar, spruce and pine
Stands glistening — form under line,
Spirit-tipped body, earthly-divine.

LOUIS WARD

THOMAS H. GREER
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# *Independent Study: An Experiment*

INSTRUCTORS IN THE HUMANITIES Department at Michigan State University have felt for some time that their students could profitably do more work on their own. Some have also believed that teachers could effectively teach a larger number of students than has been customary in the department. Consequently, in late spring of 1957, an experiment was planned bearing on these two ideas. It was designed only for the course in Humanities at M.S.U., which, like the other M.S.U. "Basics," is a multi-section course employing a departmental syllabus and final examination. Classroom work centers on original documents significant in Western development, and sections have been held to about forty students. However, its results should be of interest to other departments and institutions as well.

The plan of the experiment was simple: In the Fall term of 1957, certain randomly selected sections would be met by their instructors three hours a week instead of the normal four. Assigned readings, classroom methodology, examinations, and course credit would all be the same as for regular sections, but one lesson-hour each week has to be designated as independent study for which guide questions would be issued. Instructors who volunteered to participate served as the committee in charge.

The experiment ran through three terms. In the fall each instructor taught one special section of the first term of the course and, as a control, one regular section as well. In the winter a similar procedure was followed. A somewhat different arrangement in the spring will be described later. Teachers generally noted little difference between the work of the "special" and "regular" groups. Testing done during the term showed that independent work was spotty but that still, on the average, the special sections did as well as the others.

In determining a student's course grade in Humanities, the instructor's mark is averaged (50-50) with that scored on the departmental final. The results on these examinations confirmed the instructors' judgment: special and regular groups received approximately the same average scores. Furthermore, item

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analysis showed that the two groups scored about the same on questions relating to both outside assignments and those discussed in class.

Some observers suggested that the results may have been due to superior instruction. Teachers involved in the experiment naturally conceded the possibility of this, but pointed out that the special sections did as well as the regular ones taught by the same men. Since students had been selected at random, this fact seemed to rule out quality of instruction as a factor in the results.

The experimental plan was given its full test in spring quarter, when three instructors were each assigned four random sections (instead of the normal three) — two in the first term of the course and two in the second. These were the projected "full load" conditions. To compensate for the extra papers, each instructor had a reader-assistant, selected from among senior and graduate students with outstanding records in the course. The assistant was required to attend the instructor's classes and grade papers under his supervision. He was paid at the student-rate of a dollar and quarter an hour and could work up to sixty hours (including auditing) during the quarter. The arrangement appeared to create no special problems.

FOR THIS THIRD PHASE OF THE experiment results were much the same as for the previous two. On the departmental final, the first-term "specials" averaged 66 per cent of all items correct and the "regulars" 67 per cent. Item analysis showed that this advantage derived from a slightly superior performance by the "regulars" on the lessons studied independently by the "specials." Further investigation revealed, however, that the differential was due to the comparative performance of the poorer students only. Special and regular students who had earned grades of C or better from their instructors averaged about the same on each category of questions. Much the same was true in results relating to the second term group, where the averages on the final were 69 and 68 per cent, respectively.

It could be argued again (and it was) that the generally satisfactory showing of the special sections was due to superior instruction. What is indisputable is that on the final examination, students with a C-or-better average performed as well on items they had studied *independently* as did those who had discussed the material in class. There is no great mystery about this. When assigned a lesson on their own they simply gave more time to it than when they could rely upon the instructor. Also indisputable is the fact that D-F students were less successful in working on their own.

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Student reactions confirmed the statistical picture. After the Winter quarter, the department mailed a brief questionnaire to each "special" student enrolled in that term. (Of 167 sent out, 120 were returned, voluntarily and unsigned). Nearly all who had received course grades of C or above stated that their independent work had "usually" or "always" been adequate to meet requirements. Only about half of the D-F group felt this way. The question "Would you enroll in a special section in preference to a regular section?" got these replies: A-B group, "yes" 4 to 1; C group, "yes" 3 to 1; D-F group, "no" 4 to 1. The over-all ratio was "yes" 2 to 1.

REASONS GIVEN FOR THE RESPONSES are illuminating. Weak students explained that they needed help to interpret the assigned documents correctly. Some said that they were missing an hour of education each week that they could ill afford to miss. Strong students, on the other hand, enjoyed the challenge of independent study. Many stated that they felt four meetings a week unnecessary in the course. Others said the arrangement made them feel "more responsible," and some welcomed having "extra time for my major."

Instructors in the department were concerned about the effect of the plan on the amount of time a student gave to the course. Obviously he would be in class one less hour per week; would he make this up in independent study? The questionnaire showed that 70 per cent estimated they gave the same total amount of time to the experimental program as they did to their previous work in a regular section. About 25 per cent said they gave it more time, and only 5 per cent said they gave it less. In the D-F group, over half replied "more," but the "more" seldom produced a higher grade; virtually all those who had received a D in a regular section received a D in the special section also. As a matter of fact, 75 per cent of all students responding earned the same course grade in the experimental class as they had the previous term. Twenty per cent raised their mark, and five per cent lowered it.

Consensus among the instructors was that the plan was practicable and could be applied without altering either the spirit or substance of the course. Obviously the student missed certain discussions of presumed value; on the other hand, he benefited by doing certain lessons on his own. The instructors felt that four sections meeting three times a week was a slightly heavier load than the normal three sections meeting four times a week. There was an increased number of student contacts and a somewhat greater sense of pressure in the classroom. Since the committee deliberately chose the easier

lessons for the outside work, there were no "easy" days in class. Each hour tended to be tough and challenging, with "hardly a chance to catch your breath." On the other hand, the instructor was aided by having a student assistant in reading examinations. The net increase of energy required of the teacher was put at "about 10 per cent."

In conclusion, then, the aims of the experiment were reasonably well achieved. The majority of students assumed increased responsibility without loss in measurable accomplishment and expressed a preference for the experimental plan over the regular one. Weak students (D's and F's) fell off somewhat in relative performance and preferred more meetings with the instructor.

THE NUMBER OF STUDENTS TAUGHT by each instructor was substantially increased, four normal-size sections being assigned instead of three—an increase of one-third. The saving in instructional cost was thus far greater than the seventy-five dollars per term paid the reader-assistant. Equally important to institutional economy was the effect on classroom space: one less meeting a week meant a 25 per cent saving.

It might be said that still fewer class meetings per week would achieve still greater economies! But there is an obvious limit beyond which instruction may not be reduced without changing sharply the character of a course. Each department must be its own judge in this. In the Humanities course at Michigan State, the instructors concerned felt that the one hour reduction in class time achieved certain desired results—without basically changing the nature of the program. Most alternative proposals for augmenting instructor productivity would, on the contrary, destroy what are felt to be important qualities in the established scheme. Teaching by television, for example, or by large lecture groups, would eliminate to a substantial degree the feeling of immediacy, of give-and-take, of personal association, now found in the course.

While conditions elsewhere may differ, several statements may safely be made for all to consider: (1) most college students can be relied upon to accomplish more on their own than they are presently doing; (2) there is no necessary or magic relationship between number of class hours and number of course credits; and (3) student reader-assistants, under proper supervision, can free teachers from many hours of grading toil—hours which can more profitably be used in teaching or research.

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# MIDWESTERN PROGRESSIVE POLITICS

A HISTORICAL STUDY OF ITS ORIGINS AND DEVELOPMENT

1870-1958

BY RUSSEL B. NYE

MIDWESTERN PROGRESSIVE POLITICS traces the career of progressivism in the Midwest from the days of the Grangers to the present. It shows the movement to be essentially a regional response to regional problems, with the shortcomings of a restricted point of view. Mr. Nye emphasizes a point hitherto neglected by historians—the difference in kind between Midwestern progressivism and its Eastern counterpart.

Recaptured in these pages are such personalities as Ignatius Donnelly and "Sockless Jerry" Simpson, General Coxey and "Mary Yellin" Lease, Mark Hanna and "Uncle Joe" Cannon. MIDWESTERN PROGRESSIVE POLITICS explains the contributions of such groups as the Populists and the Farmers' Alliance; presents a discussion of the free-silver question, the muckrakers, and municipal reform; analyzes the influence of Bellamy, George, and the new schools of economics and sociology; re-creates several great political campaigns.

MIDWESTERN PROGRESSIVE POLITICS tells of a movement which began to stir in the Middle West over eighty years ago, and which lives yet in America, sometimes quiescent, but still maintaining the American tradition of protest, unrest, and opposition.

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